

What is claimed is:

1. A method of managing a sliding window, comprising:
 - (a) determining whether or not a sliding window, used for determining whether or not a received IP packet is to be transmitted or abandoned, is full of IP packets;
and
 - (b) updating sequence numbers stored in the sliding window by adding a size of the sliding window or predetermined amount to each of the sequence numbers if the sliding window is full of IP packets.

2. A method of managing a sliding window, comprising:
 - (a) setting the size and sequence number information of a sliding window;
 - (b) receiving an IP packet and reading a sequence number included in the received IP packet;
 - (c) determining whether or not the sequence number of the received IP packet is within a range of sequence numbers of the sliding window set in (a);
 - (d) if the sequence number of the received IP packet is within the range of the sequence numbers of the sliding window, transmitting the received IP packet to a specified network layer and otherwise, abandoning the received IP packet;
 - (e) determining whether or not the sliding window is full of IP packets; and
 - (f) updating the sliding window if the sliding window is full of IP packets.

3. The method of claim 2, wherein in (a), leftmost and rightmost values of the sliding window are set to 0 and 1, respectively, and the size of the sliding window is set to n.

4. The method of claim 3, wherein if the sliding window is full of IP packets in (f), the sliding window is updated by adding a size of the sliding window set in (a) to each of the sequence numbers stored in the sliding window.

5. The method of claim 2, wherein in (a), leftmost and rightmost values of the sliding window are set to 0 and 1, respectively, the size of the sliding window is set to n , and the extent to which each of the sequence numbers stored in the sliding window is to be increased is set to m .

6. The method of claim 5, wherein if the sliding window is full of IP packets in (f), the sliding window is updated by adding m to each of the sequence numbers stored in the sliding window.

7. An apparatus for managing a sliding window, comprising:
a sequence number information reading unit operable to receive an IP packet and read a sequence number included in the received IP packet;
memory operable to store sequence number information of a sliding window;
and
a comparison unit operable to compare the sequence number read by the sequence number information reading unit with the sequence number information of the sliding window, transmit the received IP packet to a specified network layer if the sequence number read by the sequence number information reading unit is within a range of sequence numbers stored in the sliding window, abandon the received IP packet otherwise, determine whether or not the sliding window is full of IP packets, and update the sliding window if the sliding window is full of IP packets.

8. The apparatus of claim 7, wherein the comparison unit is operable to update the sliding window by adding a size of the sliding window or a predetermined value to each of the sequence numbers stored in the sliding window.

9. A computer-readable recording medium on which a program enabling a method of managing a sliding window is recorded, the method of managing a sliding window comprising:

(a) determining whether or not a sliding window, used for determining whether or not a received IP packet is to be transmitted or abandoned, is full of IP packets;
and

(b) updating sequence numbers stored in the sliding window by adding a size of the sliding window to each of the sequence numbers if the sliding window is full of IP packets.